

**What is claimed is:**

1. A method of profiling a tumor/cancer in human tissue specimens, comprising:
  - (a) exposing said human tissue specimens to one or a plurality of reagents to one or a plurality of products of genes;
  - (b) measuring quantitatively the levels of said one or said plurality of products of genes in said tissue specimens; and
  - (c) profiling said tumor/cancer from the quantitative levels of the said products of genes from step 1(b).
2. The method of claim 1, wherein said human tissue specimens is selected from a group consisting human tissue extracts, human cells, human tissues, organs, blood, blood serum, body fluids and a combination thereof.
3. The method of claim 1, wherein said human tissue specimens is blood serum.
4. The method of claim 1, wherein said tumor/cancer is a prostate cancer.
5. The method of claim 1, wherein said tumor/cancer is a glioblastoma.
6. The method of claim 1, wherein said tumor/cancer is a breast cancer.
7. The method of claim 1, wherein said gene is selected from a group consisting listed genes in the TABLE 2 of the specifications of this application.
8. The method of claim 1, wherein said genes comprises listed genes in the TABLE 2 of the specifications of this application.
9. The method of claim 1, wherein said gene is selected from a group consisting insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730), a hypothetical protein (GenBank Accession number of AF052186), TUA8 Cri-du-chat region (GenBank Accession number of AF009314), dual specificity phosphatase 10 or MPK-5 (GenBank Accession number of AB026436), Neuralized (GenBank Accession number of AF029729), regulator of G-protein signaling 1 or RGS-1 (GenBank Accession number of S59049), expressed in activated T/LAK lymphocytes or LAP-4p (GenBank Accession number of AB002405), gamma-tubulin complex protein 2 or GCP2 (GenBank Accession number of AF042379), human AMP deaminase gene or AMPD3 (GenBank Accession number of U29926), PFTAIRE protein kinase 1 or PFTK1 (GenBank Accession number of AB020641), and pleckstrin homology, sec 7 and coiled/coiled domains 1 or cytohesin 1 (GenBank Accession number of M85169) and a combination thereof.
10. The method of claim 1, wherein said genes comprises insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730), a hypothetical protein (GenBank Accession number of AF052186), TUA8 Cri-du-chat region (GenBank Accession number of AF009314), dual specificity phosphatase 10 or MPK-5 (GenBank Accession number of AB026436), Neuralized (GenBank Accession number of AF029729), regulator of G-protein signaling 1 or RGS-1 (GenBank Accession number of S59049), expressed in activated T/LAK lymphocytes or LAP-4p (GenBank Accession number of AB002405), gamma-tubulin complex protein 2 or GCP2 (GenBank Accession number of AF042379), human AMP deaminase gene or AMPD3 (GenBank Accession number of U29926), PFTAIRE protein kinase 1 or PFTK1 (GenBank Accession number of AB020641), and pleckstrin homology, sec 7 and coiled/coiled domains 1 or cytohesin 1 (GenBank Accession number of M85169).
11. The method of claim 1, wherein said gene is insulin-like growth factor binding protein 2 or IGFBP2

(GenBank Accession numbers of X16302 and S37730).

12. The method of claim 1, wherein said products of genes is selected from the group consisting of gene mRNA transcripts, proteins encoded by genes, modifications of the encoded proteins and a combination thereof.

13. The method of claim 1, wherein said reagents is selected from a group consisting monoclonal antibody, polyclonal antibody, nucleic acid of either RNA or DNA, polynucleotide, aptamer, other binders to a protein and a combination thereof.

14. The method of claim 1, wherein said reagent is an antibody against insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).

15. The method of claim 1, wherein said measuring is performed using methods selected from a group consisting of molecular hybridization methods such as Northern blot, *in situ* hybridization, branched DNA methods, rolling cycle amplification (RCA), RNA transcription methods, gene chip methods, cDNA microarray, polymerase chain reaction (PCR), reverse transcription-PCR (RT-PCR), quantitative PCR (Q-PCR), Western blot, immunocytochemistry, immunohistochemistry, fluorescent cell sorting, and a combination thereof.

16. The method of claim 1, wherein said profiling is assessing, diagnosis or prognosis of PTEN tumor suppressor gene abnormality status such as PTEN tumor suppressor gene mutations, deletions, aberrant or absent PTEN mRNA or PTEN protein.

17. The method of claim 1, wherein said profiling is assessing, diagnosis or prognosis of PTEN-related signal transduction pathway and its responsiveness to said pathway modulators such as agonists or antagonists.

18. The method of claim 17, wherein said PTEN-related signal transduction pathway is the PI3K-Akt pathways.

19. The method of claim 17, wherein said modulator is an antagonist or inhibitor.

20. The method of claim 19, wherein said antagonist is an Akt inhibitors.

21. A method of screening a compound inhibits cancer cell growth, comprising:

(a) exposing said cancer cells treated with and without said compound to one or a plurality of reagents to one or a plurality of products of genes;

(b) measuring quantitatively the levels of upregulation or down-regulation of said one or said plurality of products of said genes in said compound-treated vs. untreated cancer cells; and

(c) assessing said cancer cell responsiveness to the compound treatment from the quantitative levels of the upregulation or down-regulation of said products of said genes from step 21(b).

22. The method of claim 21, wherein said cancer cell is of established cancer cell line or primary cancer cell culture.

23. The method of claim 21, wherein said cancer cell is a prostate cancer cell.

24. The method of claim 21, wherein said cancer cell is a glioblastoma cell.

25. The method of claim 21, wherein said cancer cell is a breast cancer cell.

26. The method of claim 21, wherein said compound is selected from a group consisting small molecule chemical compound, peptide, nucleic acid, oligonucleotide, antibody, aptamer, a modification thereof and a combination thereof.

27. The method of claim 21, wherein said gene is selected from a group consisting listed genes in the TABLE 2 of the specifications of this application.
28. The method of claim 21, wherein said genes comprises listed genes in the TABLE 2 of the specifications of this application.
29. The method of claim 21, wherein said gene is selected from a group consisting insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730), a hypothetical protein (GenBank Accession number of AF052186), TUA8 Cri-du-chat region (GenBank Accession number of AF009314), dual specificity phosphatase 10 or MPK-5 (GenBank Accession number of AB026436), Neuralized (GenBank Accession number of AF029729), regulator of G-protein signaling 1 or RGS-1 (GenBank Accession number of S59049), expressed in activated T/LAK lymphocytes or LAP-4p (GenBank Accession number of AB002405), gamma-tubulin complex protein 2 or GCP2 (GenBank Accession number of AF042379), human AMP deaminase gene or AMPD3 (GenBank Accession number of U29926), PFTAIRE protein kinase 1 or PFTK1 (GenBank Accession number of AB020641), and pleckstrin homology, sec 7 and coiled/coiled domains 1 or cytohesin 1 (GenBank Accession number of M85169) and a combination thereof.
30. The method of claim 21, wherein said genes comprises insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730), a hypothetical protein (GenBank Accession number of AF052186), TUA8 Cri-du-chat region (GenBank Accession number of AF009314), dual specificity phosphatase 10 or MPK-5 (GenBank Accession number of AB026436), Neuralized (GenBank Accession number of AF029729), regulator of G-protein signaling 1 or RGS-1 (GenBank Accession number of S59049), expressed in activated T/LAK lymphocytes or LAP-4p (GenBank Accession number of AB002405), gamma-tubulin complex protein 2 or GCP2 (GenBank Accession number of AF042379), human AMP deaminase gene or AMPD3 (GenBank Accession number of U29926), PFTAIRE protein kinase 1 or PFTK1 (GenBank Accession number of AB020641), and pleckstrin homology, sec 7 and coiled/coiled domains 1 or cytohesin 1 (GenBank Accession number of M85169).
31. The method of claim 21, wherein said gene is insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).
32. The method of claim 21, wherein said products of genes is selected from the group consisting of gene mRNA transcripts, proteins encoded by genes, modifications of the encoded proteins and a combination thereof.
33. The method of claim 21, wherein said reagents is selected from a group consisting monoclonal antibody, polyclonal antibody, nucleic acid of either RNA or DNA, polynucleotide, aptamer, other binders to a protein and a combination thereof.
34. The method of claim 21, wherein said reagent is an antibody against insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).
35. The method of claim 21, wherein said measuring is performed using methods selected from a group consisting of molecular hybridization methods such as Northern blot, *in situ* hybridization, branched DNA methods, rolling cycle amplification (RCA), RNA transcription methods, gene chip methods, cDNA microarray, polymerase chain reaction (PCR), reverse transcription-PCR (RT-PCR), quantitative PCR (Q-PCR), Western blot, immunocytochemistry, immunohistochemistry, fluorescent cell sorting, and a

combination thereof.

36. The method of claim 21, wherein said compound is targeting PTEN-related signal transduction pathway.

37. The method of claim 36, wherein said PTEN-related signal transduction pathway is the PI3K-Akt pathways.

38. The method of claim 21, wherein said compound is a PI3K-Akt pathway inhibitor.

39. The method of claim 38, wherein said compound is an Akt inhibitor.

40. The method of claim 21, wherein said compound is a modulator of said products of said genes.

41. The method of claim 40, wherein said modulator is either an agonist or an antagonist of said products of said genes.

42. The method of claim 21, wherein said gene is insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).

43. The method of claim 21, wherein said compound is an antibody against said insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).

44. An assay kit of profiling a tumor/cancer in human tissue specimens, comprising one or a plurality of reagents to one or a plurality of products of genes;

45. The assay kit of claim 44, wherein said human tissue specimens is selected from a group consisting human tissue extracts, human cells, human tissues, organs, blood, blood serum, body fluids and a combination thereof.

46. The assay kit of claim 44, wherein said human tissue specimens is blood serum.

47. The assay kit of claim 44, wherein said tumor/cancer is a prostate cancer.

48. The assay kit of claim 44, wherein said tumor/cancer is a glioblastoma.

49. The assay kit of claim 44, wherein said tumor/cancer is a breast cancer.

50. The assay kit of claim 44, wherein said gene is selected from a group consisting listed genes in the TABLE 2 of the specifications of this application.

51. The assay kit of claim 44, wherein said genes comprises listed genes in the TABLE 2 of the specifications of this application.

52. The assay kit of claim 44, wherein said gene is selected from a group consisting insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730), a hypothetical protein (GenBank Accession number of AF052186), TUA8 Cri-du-chat region (GenBank Accession number of AF009314), dual specificity phosphatase 10 or MPK-5 (GenBank Accession number of AB026436), Neuralized (GenBank Accession number of AF029729), regulator of G-protein signaling 1 or RGS-1 (GenBank Accession number of S59049), expressed in activated T/LAK lymphocytes or LAP-4p (GenBank Accession number of AB002405), gamma-tubulin complex protein 2 or GCP2 (GenBank Accession number of AF042379), human AMP deaminase gene or AMPD3 (GenBank Accession number of U29926), PFTAIRE protein kinase 1 or PFTK1 (GenBank Accession number of AB020641), and pleckstrin homology, sec 7 and coiled/coiled domains 1 or cytohesin 1 (GenBank Accession number of M85169) and a combination thereof.

53. The assay kit of claim 44, wherein said genes comprises insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730), a hypothetical protein (GenBank Accession number of AF052186), TUA8 Cri-du-chat region (GenBank Accession number of AF009314), dual specificity



phosphatase 10 or MPK-5 (GenBank Accession number of AB026436), Neuralized (GenBank Accession number of AF029729), regulator of G-protein signaling 1 or RGS-1 (GenBank Accession number of S59049), expressed in activated T/LAK lymphocytes or LAP-4p (GenBank Accession number of AB002405), gamma-tubulin complex protein 2 or GCP2 (GenBank Accession number of AF042379), human AMP deaminase gene or AMPD3 (GenBank Accession number of U29926), PFTAIRE protein kinase 1 or PFTK1 (GenBank Accession number of AB020641), and pleckstrin homology, sec 7 and coiled/coiled domains 1 or cytohesin 1 (GenBank Accession number of M85169).

54. The assay kit of claim 44, wherein said gene is insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).

55. The assay kit of claim 44, wherein said products of genes is selected from the group consisting of gene mRNA transcripts, proteins encoded by genes, modifications of the encoded proteins and a combination thereof.

56. The assay kit of claim 44, wherein said reagents is selected from a group consisting monoclonal antibody, polyclonal antibody, nucleic acid of either RNA or DNA, polynucleotide, aptamer, other binders to a protein and a combination thereof.

57. The assay kit of claim 44, wherein said reagent is an antibody against insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).

58. The assay kit of claim 44, wherein said assay kit is useful for methods selected from a group consisting of molecular hybridization methods such as Northern blot, *in situ* hybridization, branched DNA methods, rolling cycle amplification (RCA), RNA transcription methods, gene chip methods, cDNA microarray, polymerase chain reaction (PCR), reverse transcription-PCR (RT-PCR), quantitative PCR (Q-PCR), Western blot, immunocytochemistry, immunohistochemistry, fluorescent cell sorting, and a combination thereof.

59. A therapeutic useful antibody against insulin-like growth factor binding protein 2 or IGFBP2 (GenBank Accession numbers of X16302 and S37730).

60. The said antibody of claim 59 is a neutralizing antibody.